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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,191	07/31/2003	Joseph E. Foster	2166-206(16507)	2189
36527	7590	10/18/2006	EXAMINER	
ROSS CONTROLS ATTN: ANGELA DAVISON 1250 STEPHENSON HIGHWAY TROY, MI 48083			LE, HUYEN D	
			ART UNIT	PAPER NUMBER
			3751	

DATE MAILED: 10/18/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

**OCT 18 2006**

**Group 3700**

Application Number: 10/631,191  
Filing Date: July 31, 2003  
Appellant(s): FOSTER, JOSEPH E.

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Mark L. Mollon

For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed December 23, 2005 appealing from  
the Office action mailed 08/30/2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 4-6, 11-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilson (1,627,299).

The Wilson reference discloses a valve assembly comprising: a movable valve element 15 having a first face surface; a valve seat 27 having a second face surface for forming a face seal with the first face surface, wherein the first face surface includes a cavity 16 sunk into the first face surface, the cavity 16 having a peripheral bearing surface 17; an O-ring S inserted into the cavity 16 and having an outer edge contacting the peripheral bearing surface 17; and a retainer 22 secured into the cavity 16 internally of the O-ring, and having a sloped peripheral edge 23 squeezing the O-ring against the peripheral bearing surface 17, wherein the O-ring is deformed substantially to substantially fill the cavity 16 between the peripheral bearing surface 17 and the sloped peripheral edge 23, and wherein a portion 26 of the O-ring extends out of the cavity 16 above the first face surface for forming a seal between the first and second face surfaces.

Regarding claim 2, the retainer 22 has an unsloped peripheral edge portion (contacting the sidewall of recess 18) between the sloped peripheral edge 23 and the face surface.

Regarding claim 4, the movable valve element 14 comprises a piston.

Regarding claim 5, the movable valve element comprises a poppet 12.

Regarding claim 6, the cavity 16 is sunk into the first surface of the movable valve element 15.

Regarding claim 11, the valve assembly further comprises a valve stem 12 coaxially with the movable element 14 and the retainer 22, the movable valve element and the retainer being compressed together on the valve stem 12.

Regarding claim 12, the O-ring is a toroidal, wherein the peripheral bearing surface is cylindrical, and the retainer is disc-shaped.

Regarding claim 13, the O-ring is comprised of elastomeric material.

Regarding claim 15-17, the method of providing a face seal in a valve assembly is inherently performed during the normal assembly and use of the device.

#### **(10) Response to Argument**

Applicant argues that Wilson fails to disclose an O-ring squeezed by a sloped peripheral edge of a retainer against the bearing surface so that the O-ring is deformed to substantially fill the cavity between the edge and the bearing surface. Applicant further asserts the sealing ring S of Wilson is not an O-ring because an O-ring is a toroidal elastomer having a substantially round cross section.

Examiner respectfully disagrees with applicant.

The sealing ring S of Wilson is composed of united layers of asbestos forming a stiff ring and substantially retaining its form under pressure, but the sealing ring S is still elastic and compressible (col. 2, lines 94-104). The sealing ring S needs to be compressed (col. 2, lines 105-106) in the recess 16 by the clamping plate 22 and the bolt 20. Therefore, it is deformed to certain extent to substantially fill the cavity when

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compressed as shown in the drawing. An O-ring does not necessarily have a round cross section. For example, the Merriam-Webster online dictionary defines an O-ring as a ring (as of synthetic rubber) used as a gasket. The American Heritage Dictionary defines an O-ring as a flat ring made of rubber or plastic, used as a gasket. Wikipedia, the free online encyclopedia, recites other types of O-rings not round cross-sectioned in the middle of the webpage in Other Seal section.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

A handwritten signature in cursive script that reads "Huyen Le".

Huyen Le  
Examiner  
Art Unit 3751

Conferees:

Justine Yu

Greg Vidovich